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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/890,490	07/31/2001	Alan Chin Leong Yeo	PHN 17,751	1700
24737	7590	02/09/2006	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			NGUYEN, DUC M	
			ART UNIT	PAPER NUMBER
			2685	

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/890,490	Applicant(s) YEO ET AL.	
	Examiner Duc M. Nguyen	Art Unit 2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 28 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10, 11 and 13-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-11, 13-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to applicant's response filed on 1/28/06. Claims 10-11, 13-20 are now pending in the present application. **This action is made final.**

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims **13-15, 17** are rejected under 35 U.S.C. 102(a) as being anticipated by **Kim (US 5,963,856)**.

Regarding claim **13**, **Kim** discloses a method of tuning a receiver for a RF signal (see Fig. 2A), the method comprising the steps of:

- receiving an RF signal (see Fig. 2A);
- mixing the filtered signal with an oscillator signal to provide an IF signal (see Fig. 2A, regarding refs. 204, 206, 207, 208);
- demodulating the IF signal to provide a digital output signal and a figure-of-merit (see Fig. 2A, refs. 210, 211, 216, and col. 4, line 60 – col. 5, line 29);
- adjusting the center frequency of at least one or more filters in dependence on the figure of merit (see col. 5, lines 33-36).

Regarding claims **14-15, 17**, the claims are rejected for the same reason as set forth in claim 1 above. In addition, **Kim** would disclose adjusting one or more RF filters as claimed (see Fig. 2A regarding filters 204, 206 and col. 6, lines 4-11).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims **16, 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kim** in view of **Porambo et al (US 5,280,638)**.

Regarding claims **16, 18**, the claims are rejected for the same reason as set forth in claim 13 above. In addition, it would have been obvious to one skilled in the art at the time the invention was made to modify **Kim** to adjust filters sequentially as disclosed by **Porambo** (see col. 6, lines 25-33), to optimize the performance of the tunable filters.

5. Claim **20** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Kim** in view of **Liebetreu et al (US 5,949,832)**.

Regarding claim **20**, the claim is rejected for the same reason as set forth in claim 13 above. In addition, it would have been obvious to one skilled in the art at the time the invention was made to modify **Kim** to utilize a BER as a figure-of-merit to

adjust filters as disclosed by **Liebetreu**, (see Abstract, and col. 5, lines 34-37), for further improving the performance of the tuner.

6. Claims **10-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kim** in view of **Sakashita** et al (US **4,939,789**).

Regarding claim **10**, **Kim** would disclose all the claimed limitations, see claim 13 above, except for the tunable filter 206 is a double tuned band filter. However, using a double tuned band filter for a tunable filter is well known in the art as disclosed by **Sakashita** (see Fig. 22, col. 11, lines 60-68). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate Sakashita's teaching to Kim to use the double tuned filter for the tunable filter 206 as well, for utilizing advantages of the double tuned band filter such as high quality factor Q.

Regarding claim **11**, the claim is rejected for the same reason as set forth in claim 10 above. In addition, **Kim** discloses a pre-amplifier, a mixer and a decoder as claimed (see Fig. 2A, refs. 205, 206, 212, 213).

7. Claims **13-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Porambo** et al (US **5,280,638**) in view of **Liebetreu** et al (US **5,949,832**).

Regarding claim **13**, **Porambo** discloses a method of tuning a receiver for a RF signal (see Abstract), the method comprising the steps of:

- receiving an RF signal (see Fig. 3);

- mixing the filtered signal with an oscillator signal to provide an IF signal (see Fig. 3, regarding refs. 36, 38, 40, 43);

- processing the IF signal to provide a figure-of-merit (see Fig. 1, ref. 25, col. 5, lines 1-8 and col. 6, lines 25-33);

- adjusting the center frequency of at least one or more filters in dependence on the figure of merit (see col. 5, lines 1-4 and col. 6, lines 25-33).

Here, although **Porambo** is silent on a demodulator, it is noted that since **Porambo** discloses an ADC 69 and a microprocessor 25 for outputting a digital value, and since utilizing a digital demodulator for a processor is known in the art as disclosed by **Liebetreu** (see Fig. 1, ref. 28 and col. 5, lines 1-5, noting that the digital control circuit 28 is just a type of microprocessor), it would have been obvious to one skilled in the art at the time the invention was made to incorporate the above teaching of **Liebetreu** to modify **Porambo**, for incorporating a demodulator circuit in the microprocessor as well, for extracting the encoded signal to obtain a BER figure of merit, for further improving the performance of the tuner.

Regarding claims **14-15, 17**, the claims are rejected for the same reason as set forth in claim 13 above. In addition, **Porambo** discloses adjusting one or more RF filters as claimed (see Fig. 3).

Regarding claims **16, 18**, the claims are rejected for the same reason as set forth in claim 13 above. In addition, **Porambo** discloses adjusting filters occur sequentially as claimed (see col. 6, lines 25-33).

Regarding claim **20**, the claim is rejected for the same reason as set forth in claim 13 above. In addition, **Porambo** in view of **Liebetreu** would disclose a BER figure of merit as claimed (see **Liebetreu**, Abstract, and col. 5, lines 34-37).

8. Claims **10-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Porambo** in view of **Liebetreu** and further in view of **Sakashita et al (US 4,939,789)**.

Regarding claim **10**, **Porambo** as modified would disclose all the claimed limitations, see claim 13 above, except for the tunable filter 38 is a double tuned band filter. However, using a double tuned band filter for a tunable filter is well known in the art as disclosed by **Sakashita** (see Fig. 22, col. 11, lines 60-68). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate Sakashita's teaching to Porambo to use the double tuned filter for the tunable filter 38 as well, for utilizing advantages of the double tuned band filter such as high quality factor Q.

Regarding claim **11**, the claim is rejected for the same reason as set forth in claim 10 above. In addition, **Porambo** discloses a pre-amp and a mixer as claimed (see Fig. 3).

Response to Arguments

9. Applicant's arguments with respect to claims 10, 13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

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10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US004402089A to **Knight**, US005752179A to **Dobrovlny**, and US006724440B1 to **Suan** et al, they all disclose double tuned band filters.

12. **Any response to this final action should be mailed to:**

Box A.F.

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

Art Unit: 2685

(571) 273-8300 (for **formal** communications intended for entry)

(571)-273-7893 (for informal or **draft** communications).

Hand-delivered responses should be brought to Customer Service Window,
Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

Any inquiry concerning this communication or communications from the examiner
should be directed to Duc M. Nguyen whose telephone number is (571) 272-7893,
Monday-Thursday (9:00 AM - 5:00 PM).

Or to Edward Urban (Supervisor) whose telephone number is (571) 272-7899.

Duc M. Nguyen, P.Ex.

Feb 4, 2006

A handwritten signature in black ink, appearing to read 'D. Nguyen', written over the printed name and date.